



TEXAS

"The economic downturn in Texas has begun, recent data suggest. The coronavirus (COVID-19) outbreak initially affected manufacturers and retailers with supply lines in China. The virus' subsequent arrival in the U.S. has produced a severe drop-off in demand for large parts of the service sector.

Some of the demand declines have intensified due to public health measures, such as social distancing and shelter-in-place policies. Additionally, record-low oil prices and the prospect of sustained depressed levels in the energy sector will further slow growth in Texas.

Before the COVID-19 outbreak in the U.S., economic activity in Texas had broadly improved. Service sector revenue and manufacturing production increased in January and February. However, data from the Dallas Fed's Texas Service Sector Outlook Survey and Texas Manufacturing Outlook Survey show a sudden contraction in March. Unsurprisingly, the service sector looks to be in worse condition than manufacturing." - Economics - Dallas Fed

AUSTIN

"The Austin economy slowed in March as the impacts of the coronavirus (COVID-19) began to surface. The Austin Business-Cycle Index grew well below trend. Jobs declined, the unemployment rate increased and initial unemployment claims surged. **Real estate activity in the metro slowed, home sales prices increased and building permits fell."** - May 2020 – Austin Economic Indicators – Dallas Fed



UNITED STATES

Payroll employment fell abruptly in March.

U.S. equity indices continued to display considerable volatility.

The nominal 10-year Treasury yield remained near all-time lows.

Oil prices remain low.

Core PCE inflation remained below the FOMC's longer-run objective.

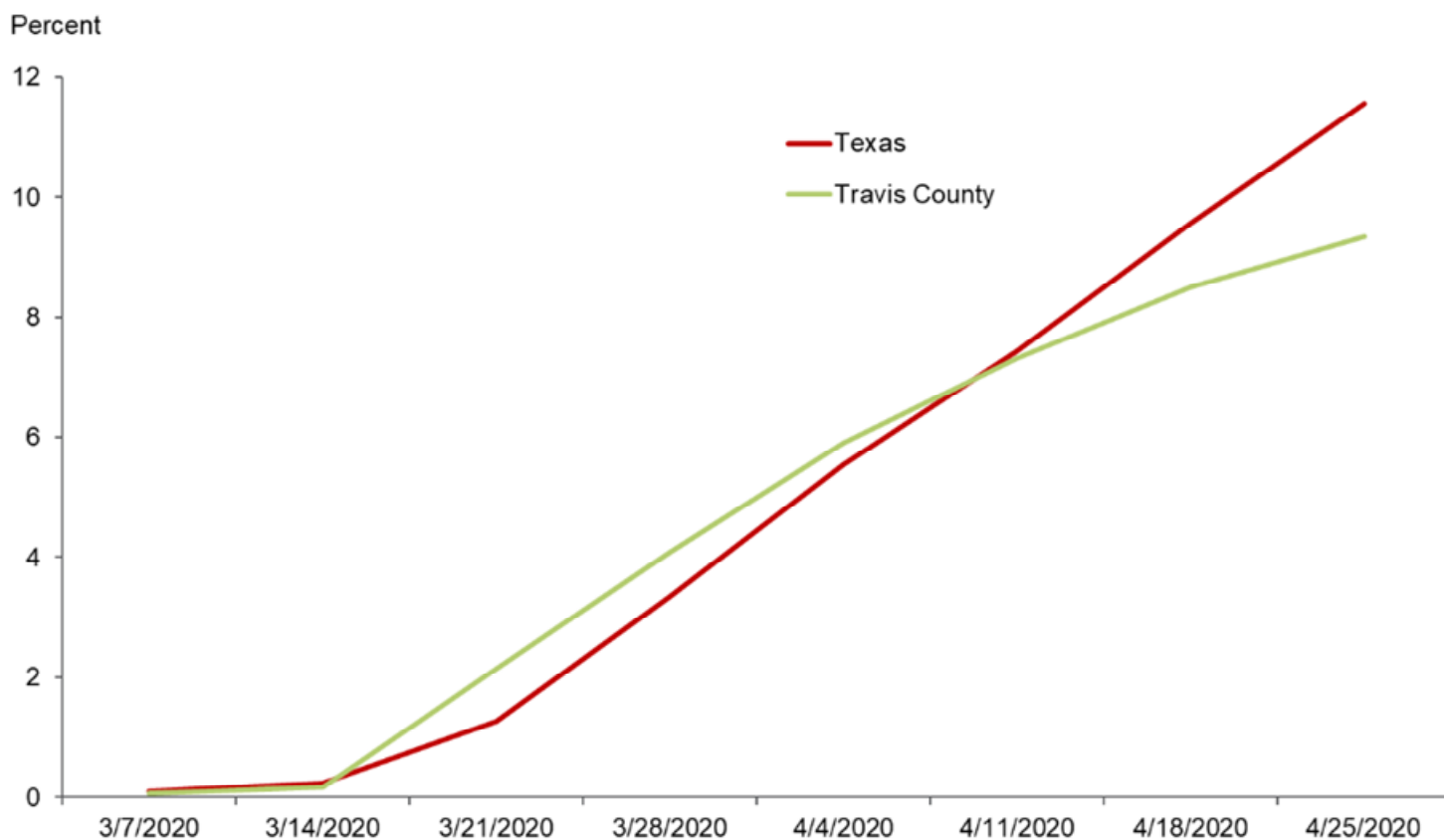
Housing activity indicators were still positive in February.

Apr 2020 – U.S. Economy Snapshot – NY Fed

JOBS – UNEMPLOYMENT CLAIMS – AUSTIN

“Initial claims for unemployment insurance benefits for the week ending April 25 numbered 6,276 locally. **Total initial claims filed from March 7 to April 25 (69,526) represented 9.3 percent of the labor force in Travis County**, a lower share than Texas’ 11.6 percent (1.6 million total initial claims) over the same period.” - May 2020 - Austin Economic Indicators - Dallas Fed

Total Initial Claims as Share of Labor Force

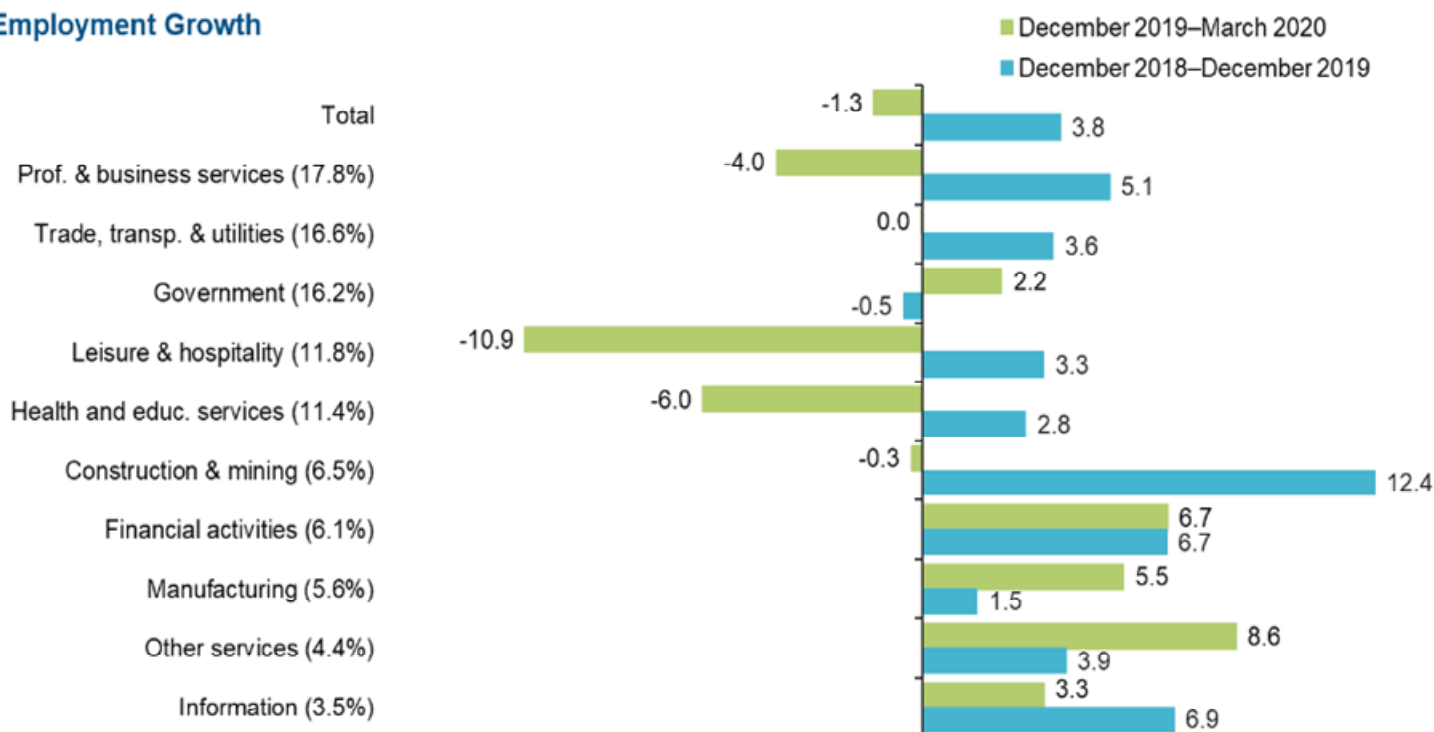


NOTE: Weekly initial claims data through April 25 and labor force data for March are used in the calculation. Most of Austin falls within Travis County.
SOURCE: Bureau of Labor Statistics, Federal Reserve Bank of Dallas.

JOBS – EMPLOYMENT GROWTH RATE – AUSTIN

“Austin jobs contracted an annualized 1.3 percent during the first quarter. The job loss was concentrated in March, when total jobs declined 8.3 percent and private sector jobs fell 9.8 percent. Many sectors posted job declines during the quarter, although the construction, financial activities, manufacturing, government, information and other services sectors experienced gains. Leisure and hospitality saw the largest employment drop (-10.9 percent annualized, or 3,910 net jobs lost), followed by health and private education (-6.0 percent, or 2,020 jobs) and professional and business services (-4.0 percent, or 2,070 jobs).” - May 2020 - Dallas Fed

Employment Growth



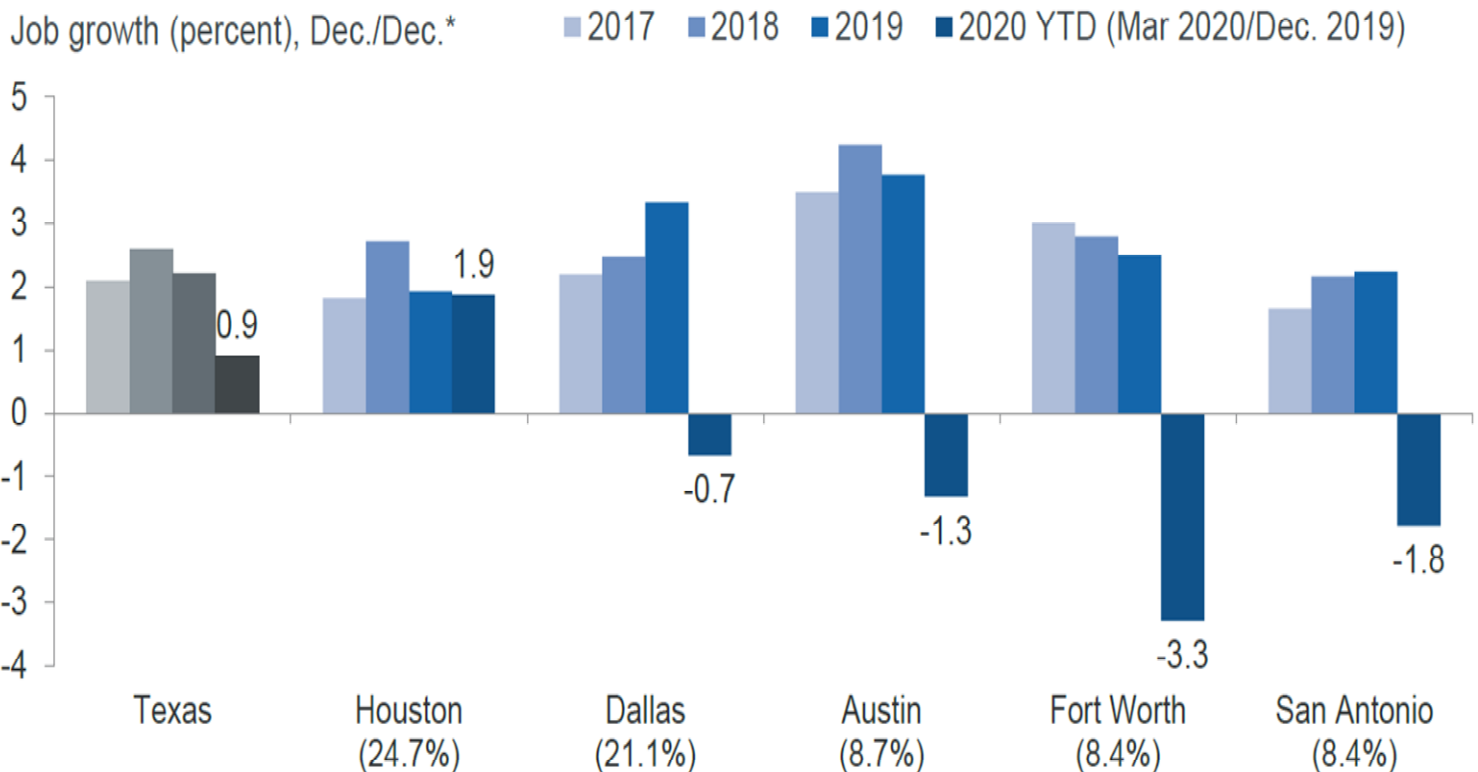
NOTE: Data show seasonally adjusted and annualized percentage employment growth by industry. Numbers in parentheses represent share of total employment and may not sum to 100 due to rounding.

SOURCE: Bureau of Labor Statistics; Texas Workforce Commission; adjustments by the Dallas Fed.

Provided by Federal Reserve of Dallas – Austin Economic Indicators – May 2020

JOBS – EMPLOYMENT GROWTH RATE – LARGE METROS IN TEXAS

Most Large Texas Metros Beginning to See Job Losses



*Seasonally adjusted, annualized rate.

NOTE: Numbers in parenthesis indicate share of state employment for most recent monthly data.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission; seasonal and other adjustments by FRB Dallas.

DATA: <https://www.dallasfed.org/research/econdata/tx-emp.aspx#tab3>

Provided by Federal Reserve of Dallas – Texas Economic Indicators – Apr 2020

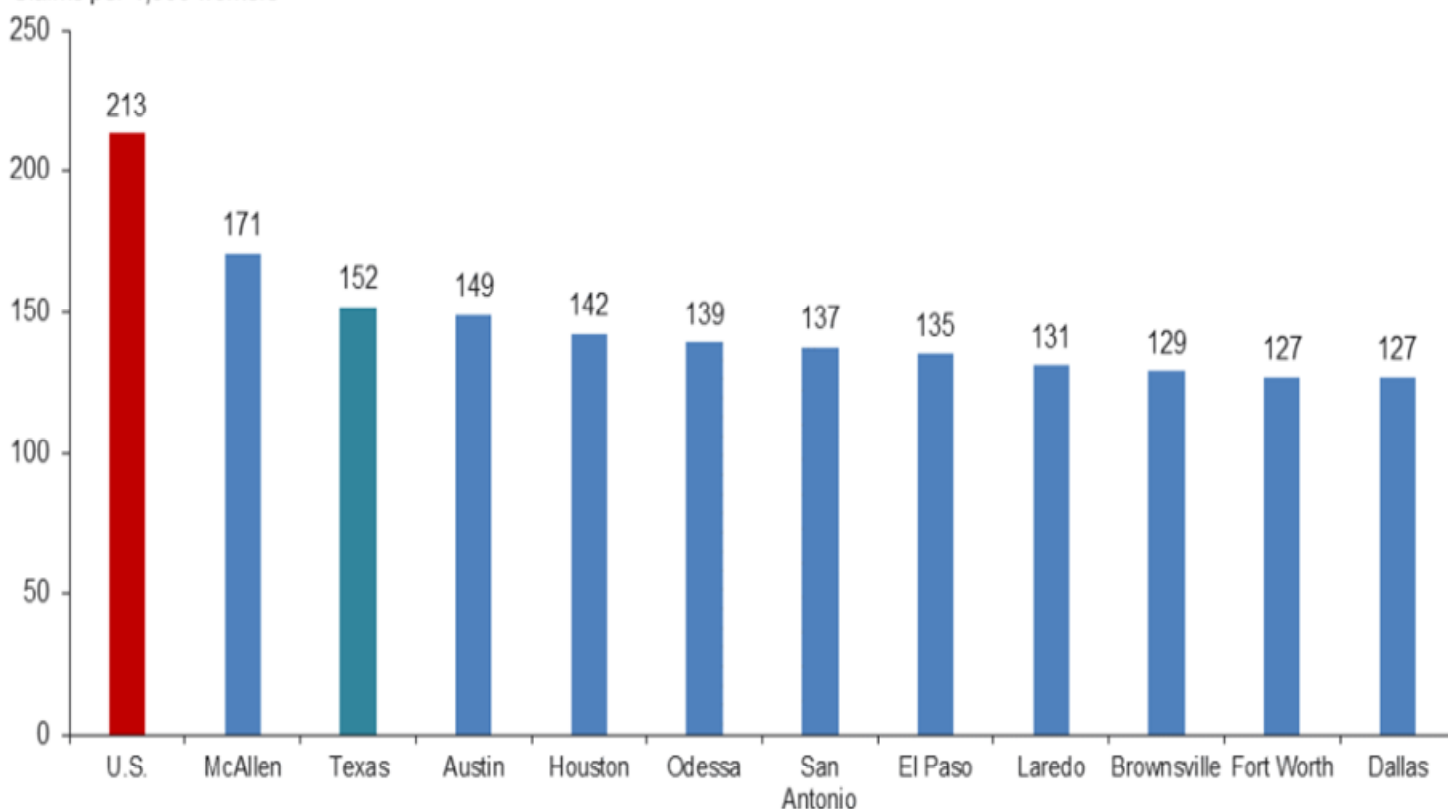
JOBS – JOBLESS CLAIMS PER 1,000 WORKERS – METRO AREAS

“Among the metros, McAllen and Austin have had the highest number of jobless claims per worker. McAllen’s higher concentration of workers in retail and home health services has made it vulnerable. Surprisingly, Austin, which boasts a larger share of workers with a remote working option than other major Texas metros, experienced a wave of layoffs. This is likely due to a large tourism sector that was gearing up for the annual South by Southwest conference in mid-March, which was canceled, as well as start-up firms that saw needed funding from angel investors and venture capital virtually dry up.”

- May 2020 - Texas Economic Update - Dallas Fed

New Unemployment Insurance Claims per Worker Highest in McAllen, Austin

Claims per 1,000 workers



NOTES: The data tally initial unemployment insurance claims filed from the week ended March 7 through the week ended April 25. The March labor force is used to normalize the number of claims.

SOURCES: Bureau of Labor Statistics; Texas Workforce Commission.

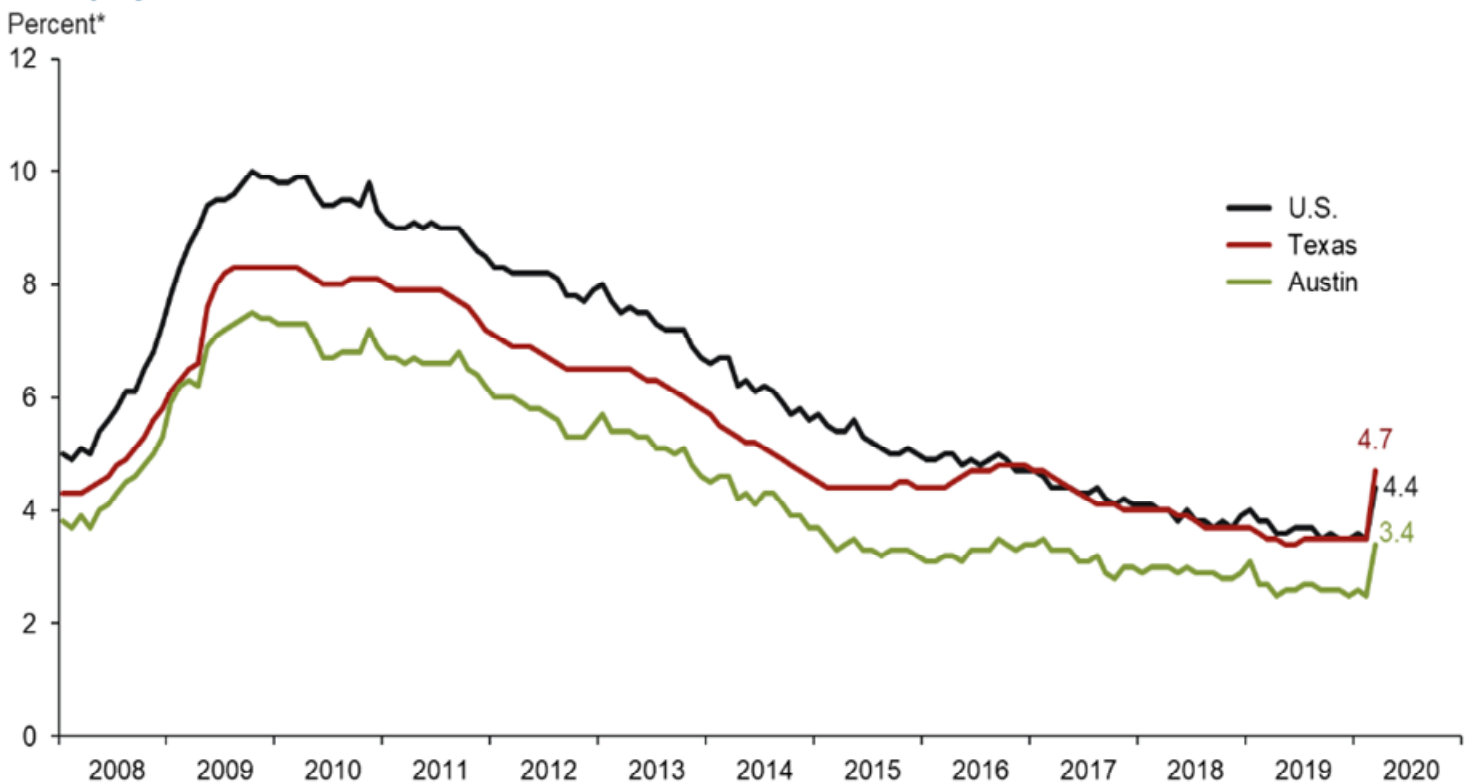
Provided by Federal Reserve of Dallas – Texas Economic Update – May 2020

JOBS - UNEMPLOYMENT RATES – AUSTIN MSA, TEXAS, U.S.

“Austin’s unemployment rate rose to 3.4 percent in March, the highest level since February 2017. The state unemployment rate increased to 4.7 percent, also the highest since February 2017, and the U.S. rate rose to 4.4 percent, the highest since August 2017. Because unemployment data are measured for the week that includes the 12th of the month, the effect of the coronavirus in Austin was not fully represented in the March data.” – May 2020 - Dallas Fed

Recent increases in weekly initial claims for unemployment insurance in Texas suggest large job losses from mid-March to mid-April. For the four weeks ending April 18, **we estimate total active claims will be about 1.5 million.**” – Apr 2020 - Texas Employment Forecast - Dallas Fed

Unemployment Rate



*Seasonally adjusted.

SOURCE: Bureau of Labor Statistics.

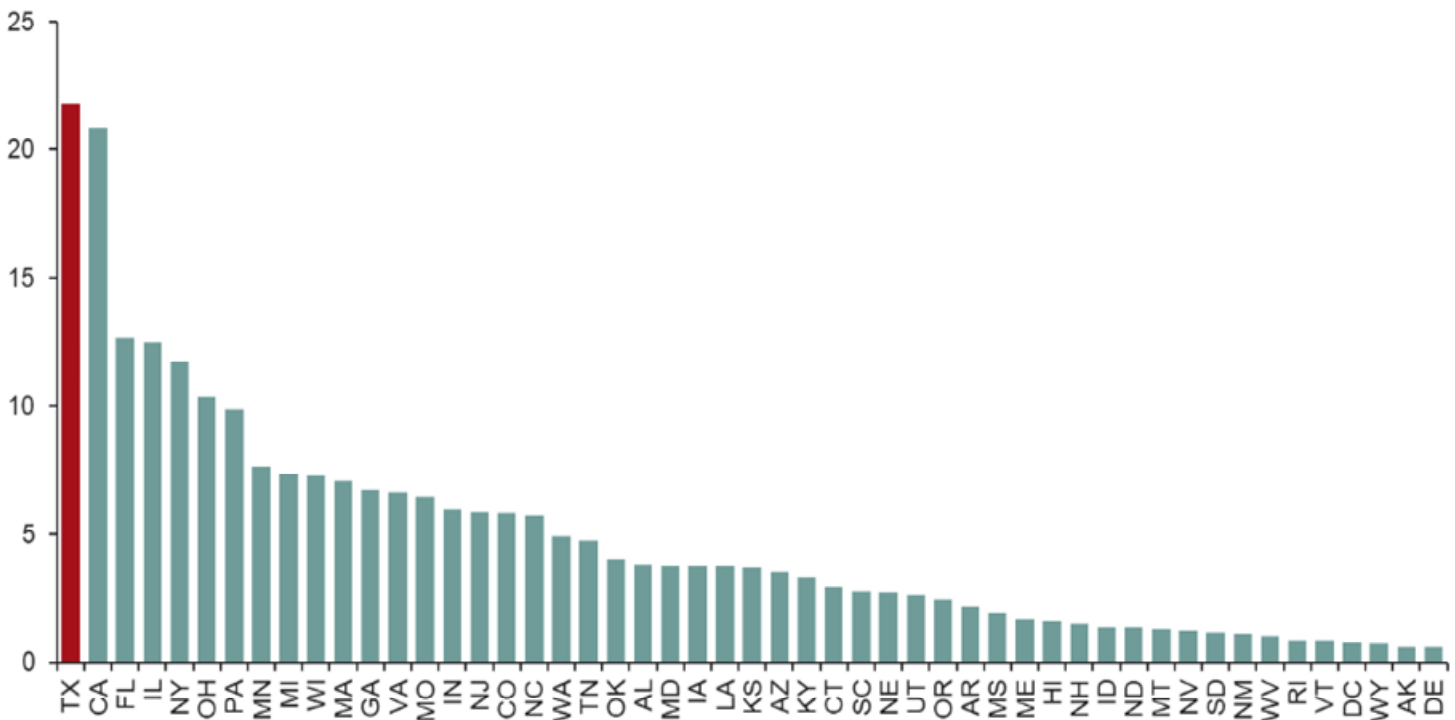
Provided by Federal Reserve of Dallas – Austin Economic Indicators – May 2020

JOBS – PAYCHECK PROTECTION PROGRAM LOANS - TEXAS

“Texas leads the nation in approved loans from the Paycheck Protection Program (PPP), established to help small businesses impacted by the COVID-19 pandemic. Through April 13, Texas had \$22 billion in PPP loans approved, according to the Small Business Administration. **Borrowing relative to state gross domestic product, however, puts Texas in the bottom third.** Construction (13.7 percent) borrowed the most among industries at the national level followed by professional, scientific and technical services and manufacturing (both 12.3 percent). A recent report published by Bloomberg calculated that the amount approved for Texas **will cover 57.5 percent of small-business jobs** in the state.” - Apr 2020 - Texas Economic Indicators - Dallas Fed

Paycheck Protection Program Loans

Approved loans, dollars (billions)



NOTE: Data are through April 13.

SOURCE: Small Business Administration.

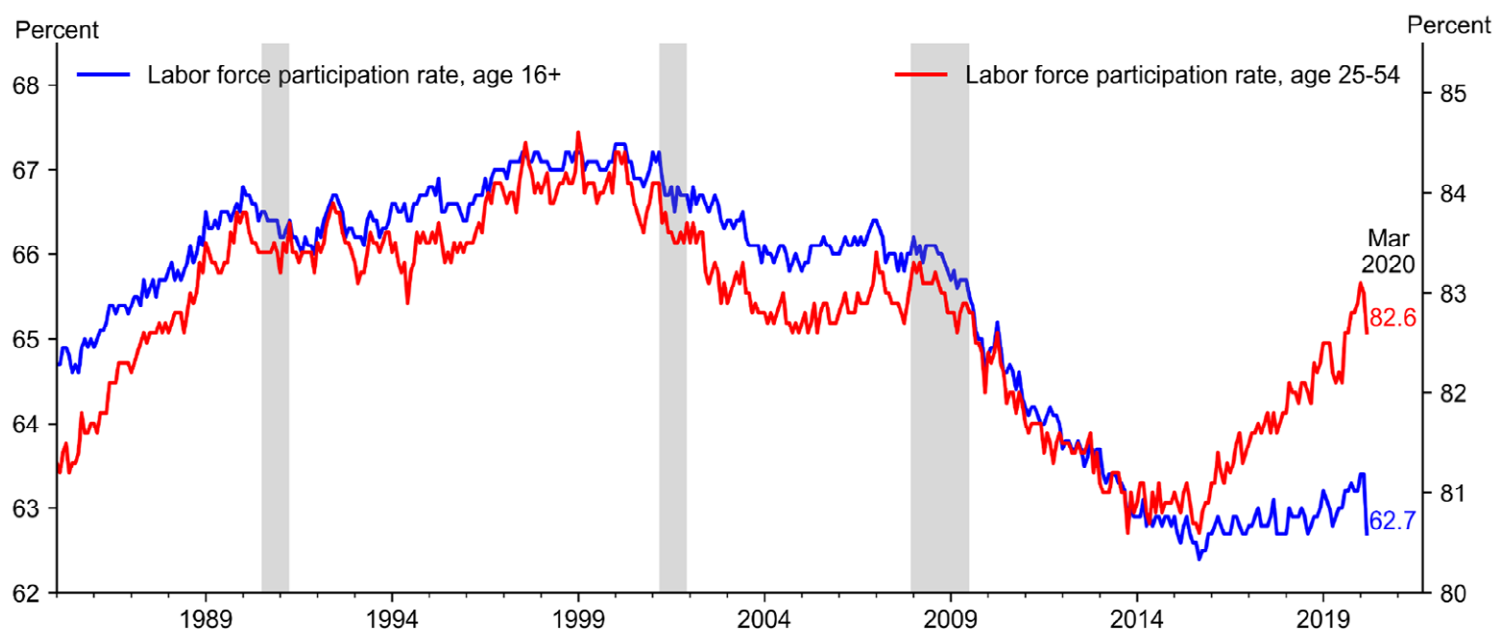
Provided by Federal Reserve of Dallas – Texas Economic Indicators – Apr 2020

JOBS – LABOR PARTICIPATION RATE IN THE US

“The number of Americans counted as ‘not in the labor force,’ meaning they did not have a job and were not looking for one, increased by 1,763,000 to a record 96,845,000 in March, the Labor Department’s Bureau of Labor Statistics reported on Friday.” “[T]he monthly employment numbers compiled by the Bureau of Labor Statistics reflect the pay period that includes the 12th of the month--or March 12.”

“Going forward, widespread business closures are expected to produce millions more people who have no job and are not looking for one because there are fewer places to look, at least through April and maybe longer. After breaking 25 records under President Donald Trump--most recently in December 2019--the number of employed Americans dropped sharply in March, to 155,772,000, BLS [Bureau of Labor Statistics] reported.

The labor force participation rate, which reached a Trump-era high of 63.4 percent this past January and February, dropped to 62.7 percent in March.” – Apr 2020 - cnsnews



SOURCES: Bureau of Labor Statistics.

Provided by Federal Reserve of Dallas – U.S. Economy Charts– 2020

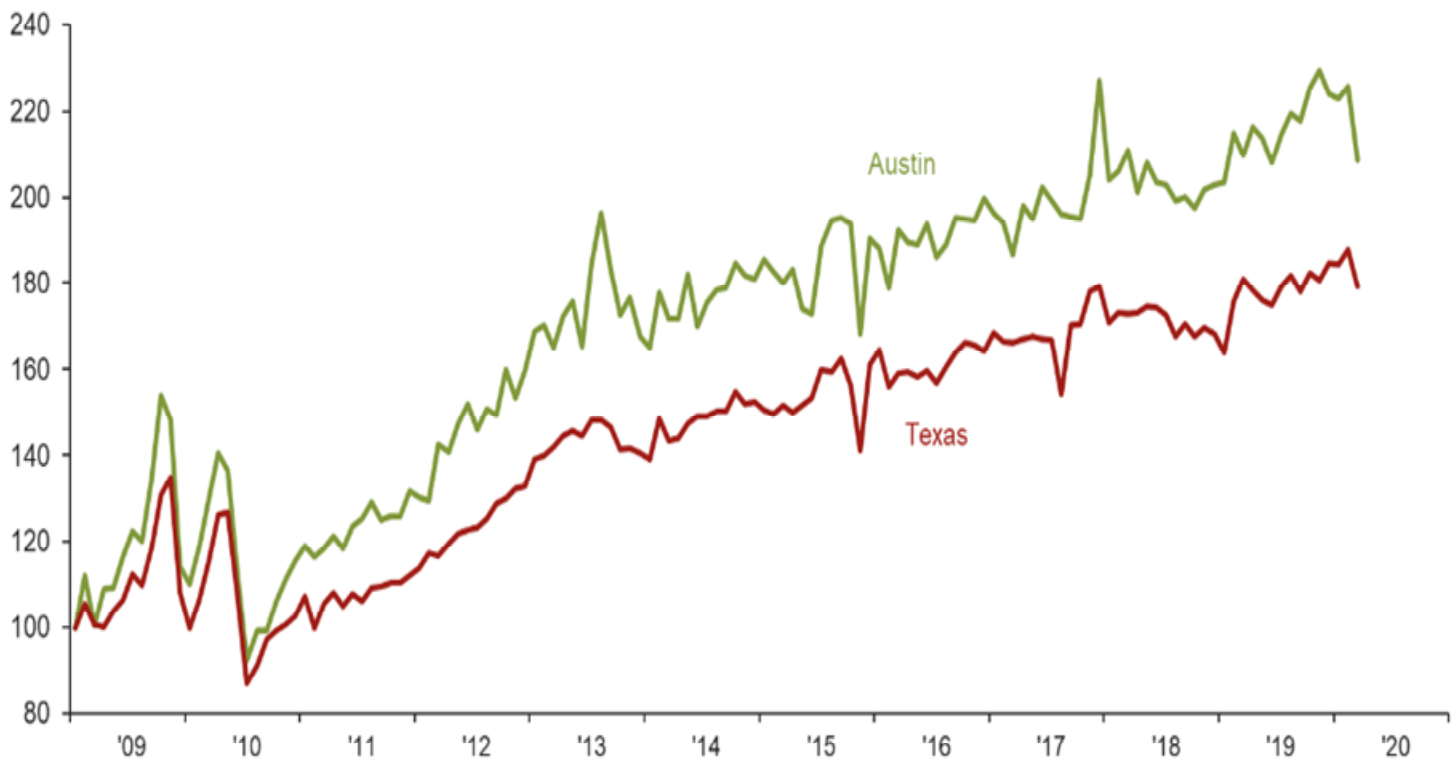
The **labor force participation rate**, as defined by the Bureau of Labor Statistics (BLS), is “the percentage of the population [16 years and older] that is either employed or unemployed [that is, either working or actively seeking work].” “A lower labor force participation rate is associated with lower gross domestic product (GDP) and lower tax revenues. It is also associated with larger federal outlays, because people who are not in the labor force are more likely to enroll in certain federal benefit programs” – Congressional Budget Office

HOUSING – EXISTING HOME SALES – AUSTIN MSA

“In March, **existing-home sales fell 7.5 percent in the Austin area** and 4.5 percent in Texas. Relative to fourth quarter 2019, first-quarter sales decreased 3.2 percent in the metro but were up 1.0 percent in the state. **The median price of homes sold in March was \$338,143 in Austin, a 10.0 percent increase year over year**, compared with \$248,681 in Texas, a 4.3 percent increase from a year ago.” – May 2020 – Austin Economic Indicators - Dallas Fed

Existing-Home Sales

Index, January 2009 = 100*



*Seasonally adjusted.

NOTE: Data measure sales of existing single-family units.

SOURCE: Multiple Listing Service; Real Estate Center at Texas A&M University; adjustments by the Dallas Fed.

Provided by Federal Reserve of Dallas – Austin Economic Indicators – May 2020

HOUSING – PERMITS AND INVENTORY – AUSTIN

“The five-month moving average for aggregate single-family and multifamily construction permits in March declined 6.1 percent in Austin but was unchanged in the state (Chart 6). Austin’s home inventory ticked up to 1.8 months, still considerably below the six months considered a balanced market.” – May 2020 – Austin Economic Indicators - Dallas Fed

Housing Permits

Index, January 2005 = 100*



*Seasonally adjusted; five-month moving average.

SOURCE: Census Bureau.

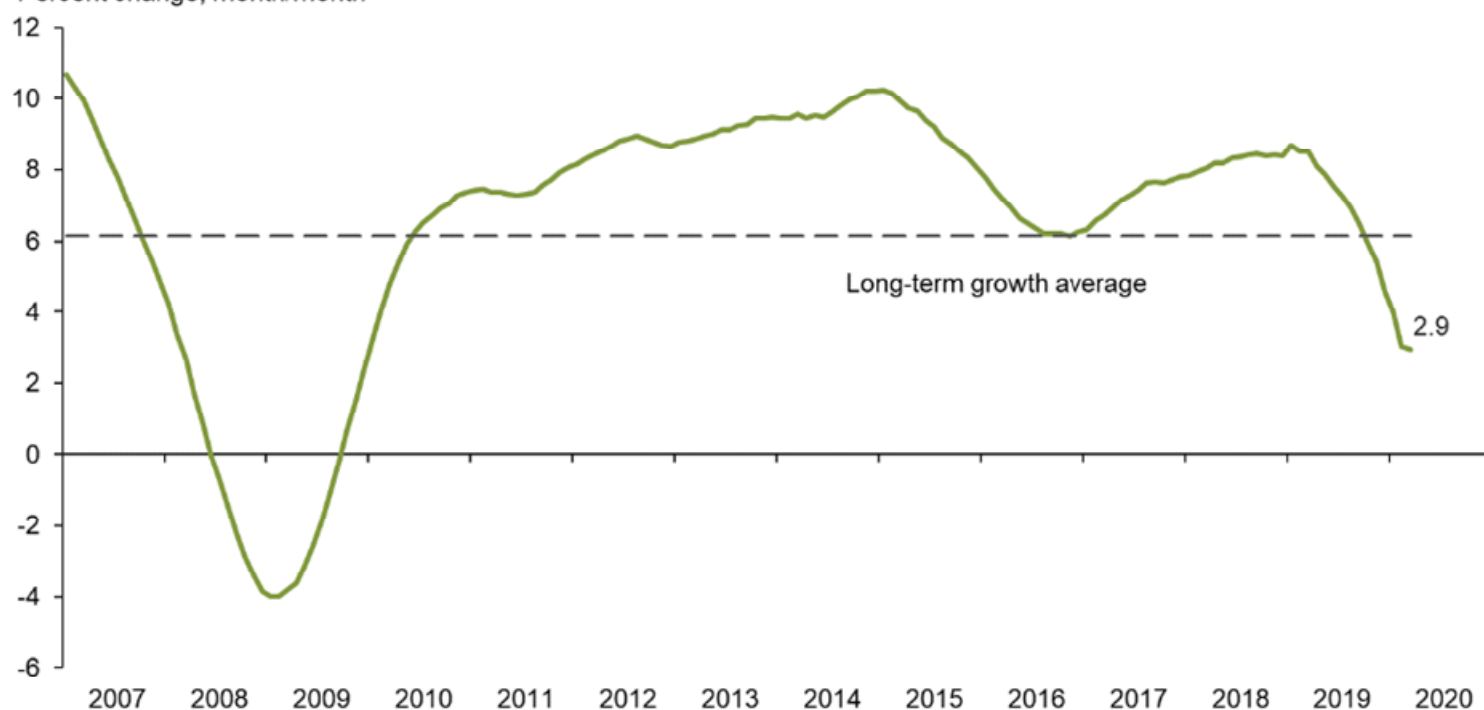
Provided by Federal Reserve of Dallas – Austin Economic Indicators – May 2020

BUSINESS CYCLE INDEX – AUSTIN MSA

“The Austin Business-Cycle Index expanded 2.9 percent in March, the lowest month-over-month change since December 2009. The decline in index growth was due to the recent job contraction and higher unemployment rate.” – May 2020 – Austin Economic Indicators – Dallas Fed

Austin Business-Cycle Index

Percent change, month/month*



*Seasonally adjusted, annualized rate.
SOURCE: Dallas Fed.

Business Cycle Indexes are meant to reflect broad movements in local economic conditions. The Dallas Fed states that “the [local area] indexes are constructed based on the aggregated movements in the local area unemployment rate, nonagricultural employment, inflation-adjusted wages, and inflation-adjusted retail sales. The weights of the components are statistically optimized for each metropolitan area in order to best capture the underlying cyclical movements in the local area economy.”

TEXAS BUSINESS OUTLOOK SURVEYS (TBOS)

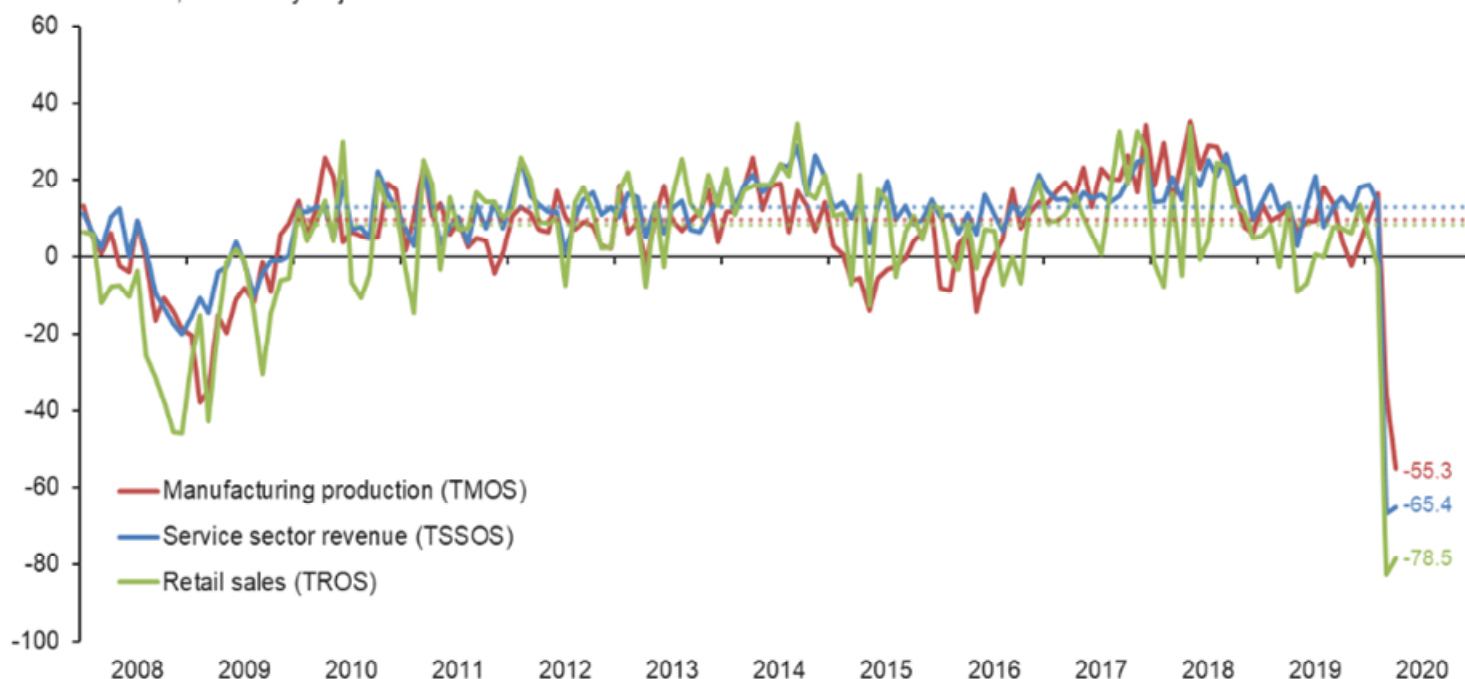
“Another timely indicator of Texas growth is data from the April Texas Business Outlook Surveys (TBOS), which show **record or near-record declines in most indicators**, including the headline indexes. Contraction in the service sector has been more acute than in manufacturing.

Record-high shares of respondents reported depressed activity in April: 74 percent of service firms noted falling revenues, and 65 percent of manufacturers indicated falling output. **A historically high share of responding service firms (30 percent) and retail firms (40 percent) said they reduced pay**, possibly to conserve cash amid dwindling revenues, sending wage and benefit indexes to new lows. Prices plummeted broadly, responding to weak demand.

This is the first time since mid-2009 that wages and prices in the manufacturing and service sectors simultaneously decreased. **Outlooks among respondents were overwhelmingly negative.**” – May 2020 – Texas Economic Update – Dallas Fed

Output and Revenue at or Near Record Lows in Manufacturing, Services, Retail

Diffusion index, seasonally adjusted



NOTES: Data are through April 2020. The diffusion index is calculated by subtracting the percentage of respondents reporting a decrease from the percentage reporting an increase. Dotted lines are postrecession averages beginning in January 2010: TROS 8.5, TMOS 9.5, TSSOS 12.7.

SOURCE: Federal Reserve Bank of Dallas, Texas Business Outlook Surveys.

Federal Reserve Bank of Dallas

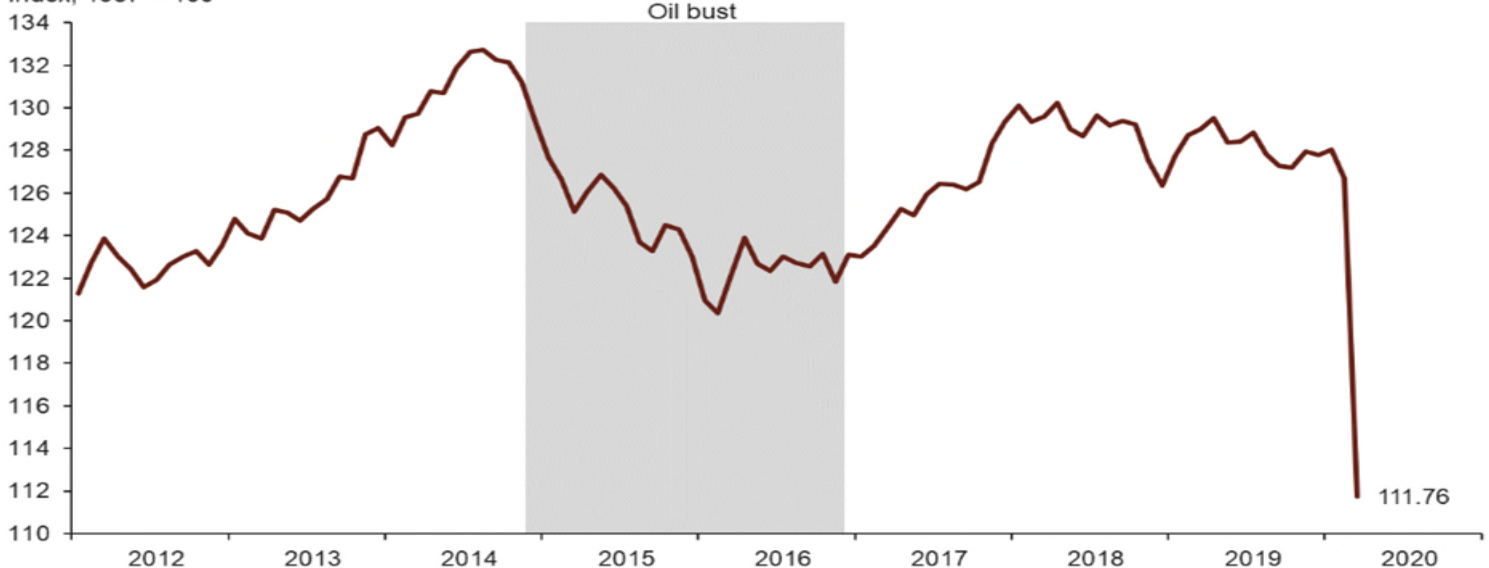
LEADING INDEX – TEXAS

“In March, the Texas Leading Index declined at its steepest pace since the data series began in January 1981, suggesting large declines in jobs in the months ahead,” said Keith Phillips, Dallas Fed assistant vice president and senior economist. “Significant uncertainties remain about when social distancing will ease up and how this will take place. This uncertainty means it is very difficult to know the pattern of growth in the economy in the second half of the year.”

“The Texas Leading Index suggests historic declines in the coming months. For the three months ending in March, all of the components declined with the exception of help-wanted advertising. Leading the negative contributions were the large jump in initial claims for unemployment insurance; and sharp declines in the U.S. leading index, stock prices of Texas-based companies and oil prices. The Texas value of the dollar increased, making goods produced here more expensive. Average weekly hours worked, like the jobs data, were for the second week in March and thus not reflective of the weakness in the second half of the month. Permits to drill oil and gas wells declined moderately.” – Apr 2020 – Texas Employment Forecast – Dallas Fed

Texas Leading Index

Index, 1987 = 100*



*Seasonally adjusted.

NOTE: Oil-bust shading represents Texas energy-sector employment peak to trough, December 2014 to November 2016. Latest value is estimated.

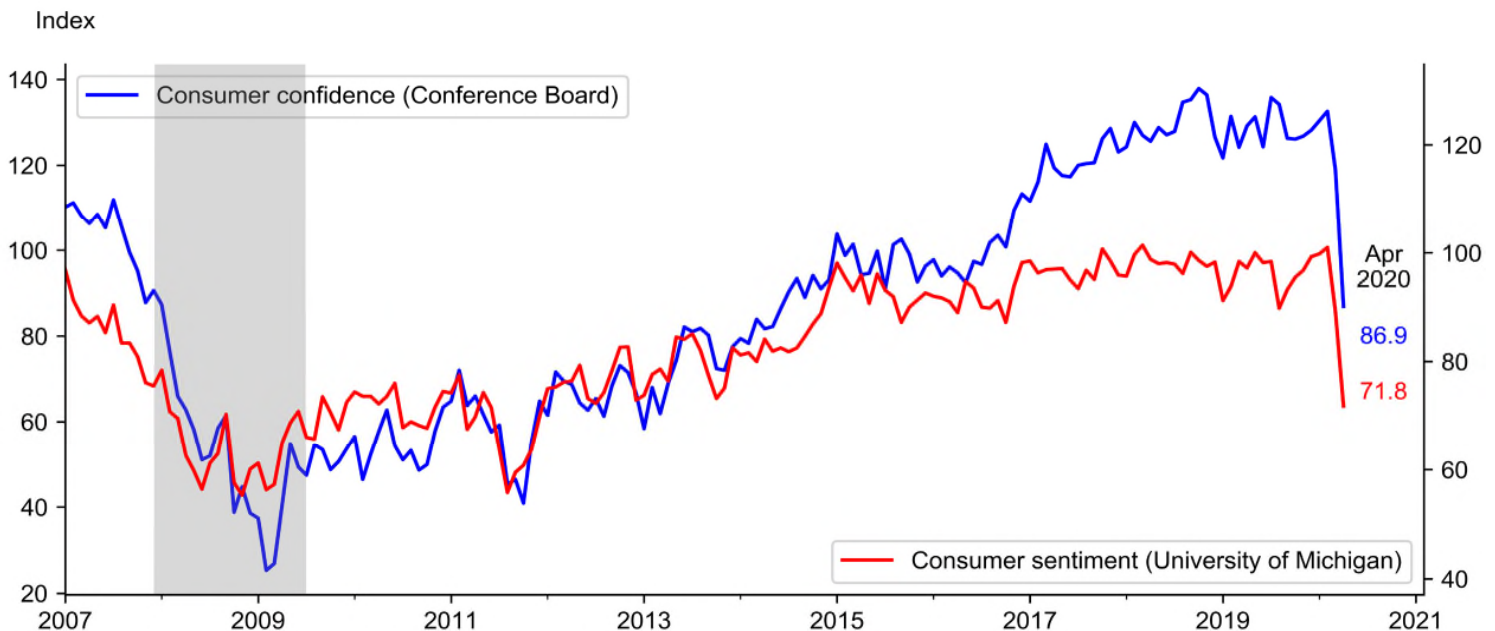
SOURCE: Dallas Fed.

Dallas Fed has defined the **Texas Leading Index** as the “single summary statistic that sheds light on the future of the State’s economy.” The Texas Leading Index is made up of eight leading indicators that have been shown to change direction – up or down – before the overall economy. The eight indicators used by the Dallas Fed are the Texas value of the dollar, U.S. leading index, real oil price, well permits, initial claims for unemployment insurance, Texas stock index, help-wanted index and average weekly hours worked in manufacturing.

CONSUMER CONFIDENCE AND SENTIMENT – U.S.

“Consumer confidence weakened significantly in April, driven by a severe deterioration in current conditions,” said Lynn Franco, Senior Director of Economic Indicators at The Conference Board. **“The 90-point drop in the Present Situation Index, the largest on record, reflects the sharp contraction in economic activity and surge in unemployment claims brought about by the COVID-19 crisis.** Consumers’ short-term expectations for the economy and labor market improved, likely prompted by the possibility that stay-at-home restrictions will loosen soon, along with a re-opening of the economy. However, consumers were less optimistic about their financial prospects and this could have repercussions for spending as the recovery takes hold.” – April 28, 2020 – The Confidence Board

Surveys of Consumers, Chief economist, Richard Curtin, commented **“Confidence inched upward in early May as the CARES relief checks improved consumers' finances and widespread price discounting boosted their buying attitudes.** Despite these gains, personal financial prospects for the year ahead continued to weaken, falling to the lowest level in almost six years, with declines especially sharp among upper income households. Improved views on buying conditions were due to discounted prices and low interest rates, although their impact was partially offset by uncertainties about job and income prospects.”



SOURCES: University of Michigan; The Conference Board.

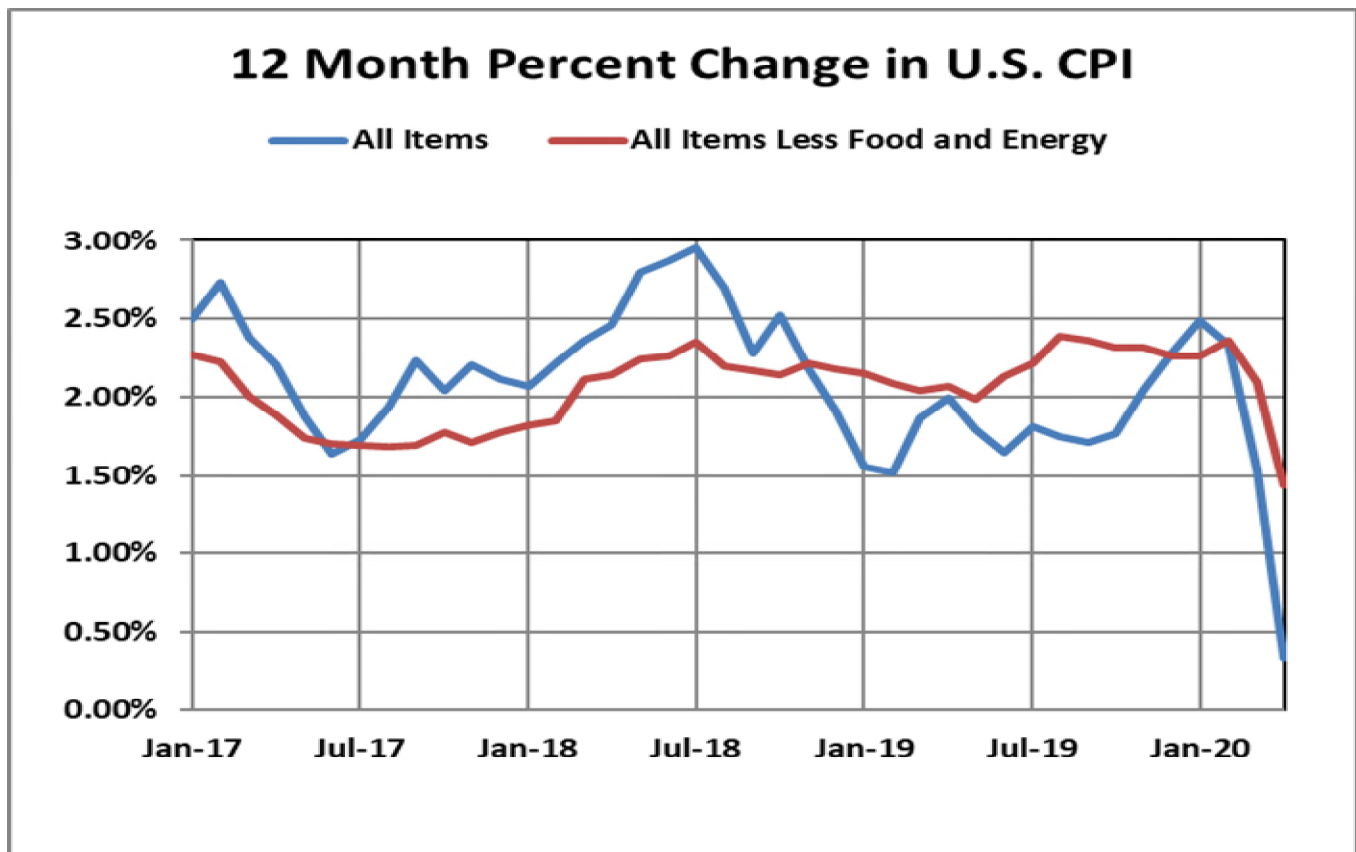
Provided by Federal Reserve of Dallas – U.S. Economy Charts– May 2020

U.S. consumer **confidence** index (CCI) is defined as “the degree of optimism on the [current] state of the economy that consumers are expressing through their activities of savings and spending.” – Wikipedia

U.S. consumer **sentiment** is defined as “the indicator of the future course of the national economy.” – Investopedia

CONSUMER PRICE INDEX

“The all items index increased 0.3 percent for the 12 months ending April, the smallest 12-month increase since October 2015. The index for all items less food and energy increased 1.4 percent over the last 12 months, its smallest increase since April 2011. The energy index fell 17.7 percent over the last year. In contrast, the food index rose 3.5 percent over the last 12 months, its largest 12-month increase since February 2012.” – Bureau of Labor Statistics – May 2020 – Economic News Release

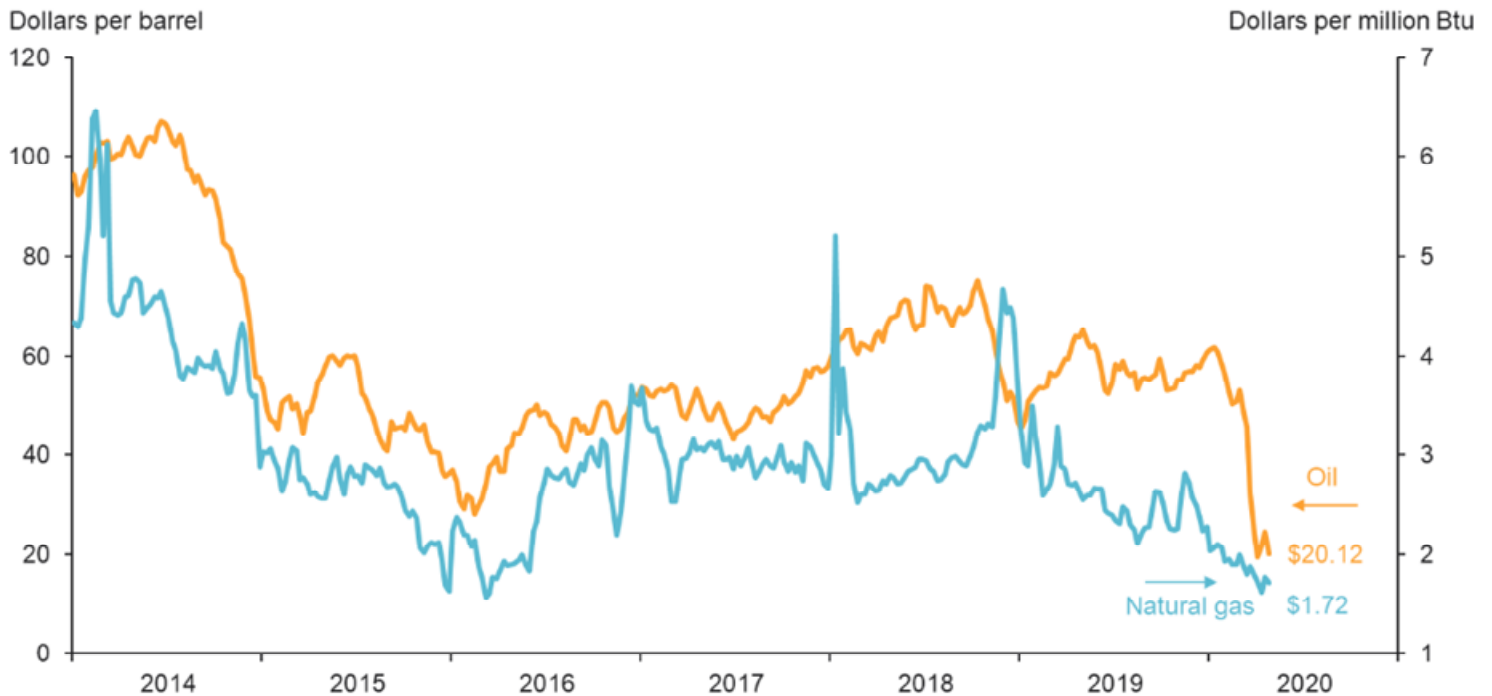


Source: Bureau of Labor Statistics, not seasonally adjusted, 1982-84=100

According to the Bureau of Labor Statistics (BLS), “There are a variety of CPI numbers generated each month. In the graph above, two numbers are compared. The first is the **Official CPI Number** that is reported to the media. It is the broadest and most comprehensive CPI and is called the **All Items CPI for All Urban Consumers**. The second one is called the **All items less food and energy**.” The BLS mentions that “Some users of CPI data use this index because food and energy prices are relatively volatile, and these users want to focus on what they perceive to be the ‘core’ or ‘underlying’ rate of inflation.”

OIL AND NATURAL GAS PRICES

“After falling in March to the lowest level in 18 years, oil prices recovered somewhat in early April, climbing to over \$24 a barrel before dipping to \$20 in the week that ended April 17. Even during this moderate bounce back, prices remained below the lows seen during the 2015–16 oil bust and were still well under the breakeven range of \$46 to \$52 per barrel needed to profitably drill a new well, as suggested by the first quarter 2020 Dallas Fed Energy Survey. Natural gas prices have continued to fall over the course of this year.” – Apr 2020 – Texas Economic Indicators – Dallas Fed



NOTE: Data are through the week ending April 17, 2020. Btu is British thermal units. Oil price is for West Texas Intermediate crude oil.

SOURCE: Energy Information Administration; *Wall Street Journal*.

Provided by Federal Reserve of Dallas – Texas Economic Indicators

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

In Dec. 2005 (revised Jul 2006), the Congressional Budget Office (CBO) prepared an assessment of the possible macroeconomic effects of an avian flu pandemic. Excerpts from that report have been compiled below. It is somewhat amazing that a document prepared 15 years ago accurately foreshadowed what is playing out today.

INTRODUCTION

“A pandemic involving a highly virulent flu strain could produce a short-run impact on the worldwide economy.” “Most of the pandemics of the past involved much milder strains; an outbreak of that kind would have a much smaller economic impact, which might be indistinguishable in the macroeconomic data.”

“If a pandemic were to occur in the near term, the options for the United States would be limited to attempts to control the spread of the virus and judicious use of limited medical facilities, personnel, and supplies. In the longer term, more tools are potentially available, including an increased treatment capacity, greater use of vaccines and antiviral drug stockpiles, and possible advances in medical technology.”

POSSIBLE PANDEMIC SCENARIOS

“Since 1700, there have been between 10 and 13 influenza pandemics (or probable pandemics) in the world, including the three that have occurred since the beginning of the 20th century. Of the three pandemics that have occurred since the beginning of the 20th century, two were mild and one was severe, suggesting a fairly high probability of a severe event.”

“Based on an analysis of past pandemics, CBO has devised two scenarios to outline the possible economic effects of a potential avian influenza pandemic.”

“The first, and more severe, scenario is roughly similar to the 1918-1919 Spanish flu outbreak.”

The second, mild-pandemic scenario resembles the 1957 and 1968 pandemics.

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

ATTACK RATE

“Estimates of the percentage of the population that became ill with influenza during past pandemics (the so-called gross attack rates) are extremely rough. But experts generally agree that the three past outbreaks during the 20th century did not differ markedly with respect to their attack rates and that those rates ranged from about 25 percent to 30 percent. Consequently, CBO applied a 25 percent attack rate in the mild scenario and a 30 percent rate in the severe scenario.”

FATALITY RATE

“Like the attack rate, the case fatality rate for a pandemic is extremely difficult to estimate, largely because the total number of infected people, including those who do not seek treatment, is unknown. Nonetheless, using available evidence, experts estimate that the case fatality rate during the 1918 outbreak was about 2.5 percent in the United States, whereas during the 1957 and 1968 episodes, the case fatality rate ranged from just under 0.1 percent to about 0.2 percent. CBO thus assumed a rate of 2.5 percent for the severe scenario and just over 0.1 percent for the mild scenario.”

Using those assumptions, the two pandemic scenarios that this paper considers are:

A severe pandemic, similar to the 1918-1919 episode, that could infect 90 million people in the United States and cause the deaths of more than 2 million of them; and

A mild pandemic that resembled the 1957 and 1968 outbreaks, which might be expected to infect 75 million people and cause roughly 100,000 deaths in the United States.

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

FATALITY RATE - CONTINUED

“Both scenarios presume that effective vaccines are not available in time to significantly alter the pandemic’s course. Quarantine and travel restrictions are among the other possible policy responses, but those approaches have been shown to have little effect on overall mortality and only a limited ability to forestall the onset of local epidemics.”

Note: “Deaths attributed to past pandemics reflect mortality above that expected in a normal flu season. According to the Centers for Disease Control and Prevention, 5 percent to 20 percent of the population catches the flu each year in the United States, and roughly 36,000 people die from the disease.”

DURATION

1. “The virus would spread widely in a very short time. On the basis of experience with severe acute respiratory syndrome (SARS) in 2003, a pandemic influenza virus would be expected to cross national borders very rapidly.”
2. “A rapid surge in the number of cases in each affected area would occur very quickly, within weeks.”
3. “The pandemic would probably spread across geographic areas and vulnerable populations in waves. In any given geographic region, each wave could last for three to five months, and a second wave could appear anywhere from one to three months after the first disappears.”

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

Assumptions Underlying Estimates of the Supply-Side Impact of an Avian Flu Pandemic

Economic Sector	Gross Attack Rate		Case Fatality Rate			
	(Percent)		Weeks Out of Work		(Percent)	
	Severe	Mild	Severe	Mild	Severe	Mild
Nonfarm Business	30	25	3	0.75	2.5	1.14
Farm	10	5	1	0.25	2.5	1.14
Household	30	25	3	0.75	2.5	1.14
Nonprofit Institutions	30	25	3	0.75	2.5	1.14
Government	30	25	3	0.75	2.5	1.14

Source: Congressional Budget Office.

Note: The gross attack rate is the percentage of the population that is infected with a disease. The case fatality rate is the percentage of infected persons who eventually die from the disease or complications.

EFFECTS UNDER A SEVERE PANDEMIC SCENARIO

“CBO was unable to find any estimates of the short-run economic effects of the three flu pandemics during the 20th century. Consequently, it based its estimate on three strands of analysis:

A rough estimate of the supply-side effects from a large share of the labor force’s becoming ill;

A very rough estimate of a pandemic’s effect on demand in individual industries; and

A comparison with the impact of the SARS epidemic in Southeast Asia and Canada.”

“For most sectors of the economy, CBO assumed that, on average, 30 percent of the workers in each sector would become ill and of those workers, 2.5 percent would die. Further, CBO assumed that those who survived would miss three weeks of work, either because they were sick, because they feared the risk of infection at work, or because they needed to care for family or friends.”

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

EFFECTS UNDER A SEVERE PANDEMIC SCENARIO - CONTINUED

“In addition to workers’ absences, many businesses (such as restaurants and movie theaters) would probably suffer a falloff in demand because people would be afraid to patronize them or because the authorities would close them.”

“CBO assumed that a pandemic’s effects would be especially severe among industries whose products required that customers congregate; examples include the entertainment, arts, recreation, lodging, and restaurant industries. Other industries, including retail trade, were assumed to suffer a smaller decline in demand, and one industry, health care, was assumed to experience an increase in demand because of the surge in demand for medical care.”

EFFECTS UNDER A MILD PANDEMIC SCENARIO

“The economic effects of a mild pandemic would be much smaller and might not even be distinguishable from the normal ups and downs of economic activity. To calculate the supply-side effect, CBO assumed that the attack rate would be 25 percent (except in the farm sector, where it was assumed to be 5 percent), the case fatality rate would be just over 0.1 percent, and the time out of work would be one-quarter of the duration assumption for the severe scenario (that is, just less than four days absent, on average).” “Compared to the long-run growth trend, a mild influenza pandemic would cause growth to slow, but would probably not cause real GDP to fall (or cause a recession).”

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

REASONS WHY THE NEXT PANDEMIC MAY BE LESS SEVERE THAN 1918 PANDEMIC

“Although it is impossible to predict with confidence what the next pandemic will look like, several factors suggest that the worst-case scenario will be less severe than the 1918 pandemic outlined earlier. Medical technology has advanced significantly, providing health care providers with more information and better treatment options, especially for complications associated with bacterial infections.

Antiviral drugs are also available and, if provided quickly, offer the prospect of decreasing the severity of infection. In addition, international mechanisms have been put in place that allow for better surveillance and a more rapid response to a new disease.

Once the virus had been identified, vaccines would be developed to protect vulnerable populations, an option that was not available in 1918. However, the length of time required to produce sufficient quantities of a vaccine would limit its ability to lessen the effects of the pandemic.”

REASONS WHY THE NEXT PANDEMIC MAY BE MORE SEVERE THAN 1918 PANDEMIC

“Balanced against those factors are some that might suggest a worse outbreak than the one that occurred in 1918. The world is now more densely populated, and a larger proportion of the population is elderly or has compromised immune systems (as a result of HIV). Moreover, there are interconnections among countries and continents— faster air travel and just-in-time inventory systems, for example—that suggest faster spread of the disease and greater disruption if a pandemic was to occur.”

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

ECONOMIC IMPACT

“Based on past influenza pandemics and the SARS outbreak, the most important effects would be a sharp decline in demand as people avoided shopping malls, restaurants, and other public spaces, and a shrinking of labor supply as workers became ill or stayed home out of fear or to take care of others who were sick.”

“Under the conditions in the severe scenario described above, the human toll would be devastating, and the economic effects would be greater than in recent recessions and roughly the same size as the average postwar recession.

In the long term, however, the economy’s response to natural disasters demonstrates that people can adapt to extreme hardship and businesses can find ways to work around obstructions. As a result, economic activity would recover, and the economy would eventually return to its previous trend growth rate.”

SHORT-TERM EFFECTS

“The most immediate impact of a pandemic would be a surge in demand for medical services. During a severe pandemic, hospitals, clinics, and doctors’ offices would probably be overwhelmed, and surveillance (keeping track of where the disease was and where it was going) would be difficult.

Health care workers would be exposed to the disease, resulting in further strains on the health care system’s capacity, as some workers became sick and others stayed home to care for family members or to avoid becoming ill.

Care for non-acute health problems would be sharply curtailed. As the pandemic progressed, international travel would dramatically decline, as people avoided avian flu ‘hotspots’ and governments restricted travel.”

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

SHORT-TERM EFFECTS - CONTINUED

“In all likelihood, people would quarantine themselves and their families by staying at home more. Nonessential activities that required social contact would be sharply cut, which would lead to significant declines in retail trade. People would avoid public places, such as shopping malls, community centers, places of worship, and public transit. Attendance at theaters, sporting events, museums, and restaurants would decline.

It seems likely that many schools would close, and even if they did not, attendance would fall dramatically as parents kept their children at home. In either event, large-scale school closings would lead to a spike in workplace absences because parents would stay home to care for their children even if they were not sick.”

“Business confidence would be dented, the supply of labor would be restricted (owing to illness, mortality, and absenteeism spurred by fear of contracting the disease), supply chains would be strained as transportation systems were disrupted, and arrears and default rates on consumer and business debt would probably rise somewhat. It seems quite likely that the stock market would fall initially and then rebound...”

LONG TERM EFFECTS

“The most important long-term impact of a pandemic is the reduction that would persist in the population and in the labor force after overall demand in the economy returned to normal. The effects of that drop in the population would depend, in part, on the characteristics of the outbreak.

If, for example, mortality was concentrated among the very young and the very old, then a pandemic would have relatively small effects on the subsequent growth of GDP. By contrast, if the disease struck workers who were in their prime working years more heavily, then the effects on GDP growth during the years following the pandemic would be more significant.”

IN-DEPTH – POSSIBLE IMPACTS OF A PANDEMIC

Assumed Declines in Demand, by Industry, in the Event of an Avian Flu Pandemic

(Percent)	Severe Scenario	Mild Scenario
Private Industries		
Agriculture	10	3
Mining	10	3
Utilities	0	0
Construction	10	3
Manufacturing	10	3
Wholesale trade	10	3
Retail trade	10	3
Transportation and warehousing		
Air	67	17
Rail	67	17
Transit	67	17
Information (Published, broadcast)	0	0
Finance	0	0
Professional and business services	0	0
Education/health care		
Education	0	0
Health care	-15	-4
Arts/entertainment/accommodation/food		
Arts and recreation	80	20
Accommodation	80	20
Food service	80	20
Other services except government	5	1
Government		
Federal	0	0
State and local	0	0

Source: Congressional Budget Office.

Note: The severe scenario describes a pandemic that is similar to the 1918-1919 Spanish flu outbreak. It incorporates the assumption that a particularly virulent strain of influenza infects roughly 90 million people in the United States and kills more than 2 million of them. The mild scenario describes a pandemic that resembles the outbreaks of 1957 to 1958 and 1968 to 1969. It incorporates the assumption that 75 million people become infected and about 100,000 of them die from the illness or complications.

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• Alibaba	3 rd Qtr 2017
• Bitcoin	4 th Qtr 2016
• Cashless Society	4 th Qtr 2017
• Chatbots	1 st Qtr 2019
• Facial Recognition	1 st Qtr 2018
• Labor Participation Rate	4 th Qtr 2015
• Libra, Calibra, Facebook	2 nd Qtr 2019
• Money Market Fund Reform – New Rules	3 rd Qtr 2016
• Natural Gas – U.S. 3 RD Largest Exporter of LNG	4 th Qtr 2019
• Negative Interest Rate Policy (NIRP)	2 nd Qtr 2016
• New Silk Road	2 nd Qtr 2017
• Pandemic – Possible Impact	1 st Qtr 2020
• Quantitative Easing	1 st Qtr 2016
• Repurchase Agreements – Repo Market in Crisis	3 rd Qtr 2019
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• Universal Postal Union	3 rd Qtr 2018

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